



United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Illinois, Indiana
Michigan, Minnesota
Ohio, Wisconsin

This Fact Sheet Will Tell You About:

- Excavation activities
- Residential well sampling
- Sediment sampling
- Work plan activities
- The well construction investigation
- How to get more information

Information Repository

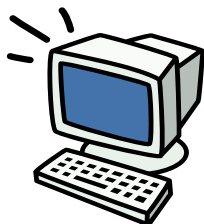
You may review detailed information about the John Mercer Drum Site at the information repository located at:



Alexandria Library
10 Maple Street
Alexandria, Ohio

Web Site

This and future updates can also be found on the following web site:



www.epa.gov/region5/sites/

Scroll through the list to find John Mercer Drum Site.

Update Fact Sheet John Mercer Drum Site

Alexandria, Ohio

June 2001

The United States Environmental Protection Agency (U.S. EPA) has been overseeing the cleanup of drums, liquids, and contaminated soil at the John Mercer Drum Site. The site is located near the intersection of Hardscrabble and Battee Roads in a rural/farmland area of St. Albans Township, Licking County, Ohio. The site encompasses 54 acres and includes wooded areas, wet fields, and a ravine located in the northeast portion of the site (see map on page 2). In addition, two barns can be found in the southern section of the site. Cleanup activities at the site are being conducted by a contractor hired by the parties considered potentially responsible for the contamination (referred to as PRPs). This fact sheet will explain the ongoing activities.

Excavation and Removal Activities

The contractors hired by the PRPs have completed the removal of contaminated soil and drums from the excavation area near the pole barn (area 2 on the site map), and have removed and disposed of the drums from the ravine area (area 1 on the site map). They continue to remove and dispose of contaminated soil from the ravine area. To date, a total of 267 drums have been removed from the ravine area and 388 drums have been removed from the excavation area near the pole barn, and 44,350 gallons of liquid wastes have been removed from the site. The liquid waste included rain water which periodically collected in the excavation area as well as waste from the drums.

In addition, two other areas in the wet field located immediately southwest of the ravine (areas 3 & 4 on the site map) have been confirmed as locations of buried drums and will need to be addressed. The cleanup of these two additional areas is addressed in a work plan outlining future site activities (see Work Plan section on page 3).

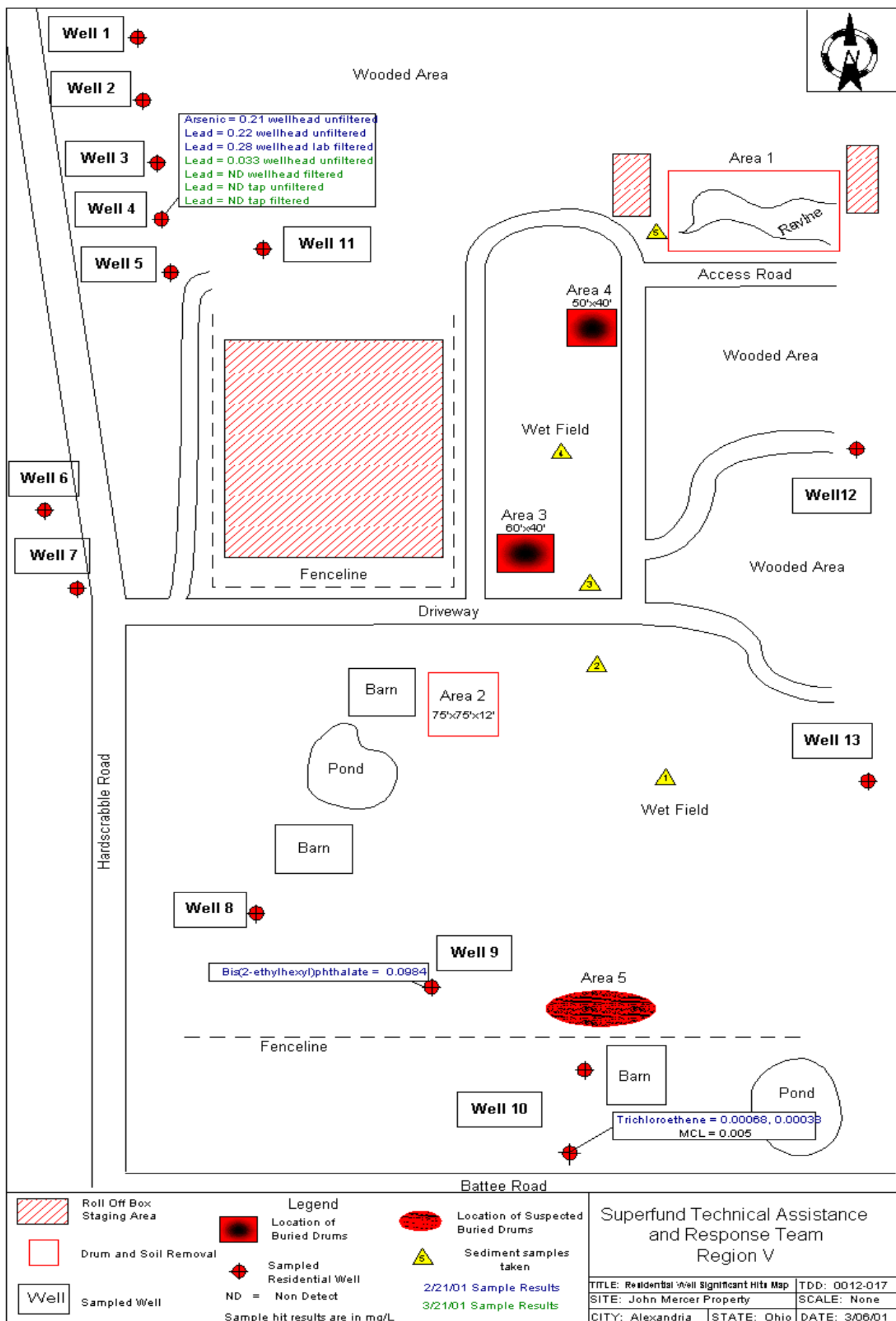
Residential Well Sampling

On November 17, 2000, the PRP contractors took well samples from seven residential wells located near the site. At that time, U.S. EPA also took samples from three of those wells. The results of U.S. EPA's samples showed the presence of a chemical in three wells (wells 9 & 10* on the map) which was not being tested for and therefore could not be precisely identified. A computer scan of the characteristics of the chemical determined that the chemical was 2,4-dichlorobenzoic acid (DCBA). DCBA is a bi-product of the breakdown of a chemical frequently used in herbicides, pesticides, and fungicides. U.S. EPA enlisted the help of the Ohio Department of Agriculture in an effort to detect and identify this or similar chemicals in additional residential well samples taken in January 2001. Although no contaminants were found in the January samples, U.S. EPA wanted to conduct more residential sampling in February.

February Sampling

On February 21, 2001, U.S. EPA collected samples from 10 wells near the site. For quality assurance purposes, two samples were collected at some of the locations to

** Well 10 is actually two wells on one residential property.*



verify the accuracy of laboratory techniques. No problems were found in the laboratory techniques. Lead and arsenic were found above drinking water standards in one well (well 4). However, the water from this well contained a lot of particulate matter and U.S. EPA suspected that the elevated levels of lead and arsenic were from the particulates. Therefore, U.S. EPA determined that a filtered sample should be taken in March.

Another contaminant, bis(2-ethylhexyl)phthalate was found at elevated levels in another well (well 9) in February. This contaminant had been found in the same well in November 2000. Because of its characteristics, it is unlikely that this phthalate moved through the ground water into this well. Additionally, phthalates are often associated with plastics, and, therefore, the phthalates detected could have originated from the well itself, the residential pump, residential pipes, sampling equipment used by U.S. EPA, or the laboratories that analyzed the sample. None-the-less, because bis(2-ethylhexyl)phthalate was detected in the February sampling, U.S. EPA decided to sample this well again in March.

March Sampling

On March 21, 2001, U.S. EPA tested wells from five homes. Three of the wells had been tested previously – one that had the lead and arsenic detection (well 4), one that had the phthalate detection (well 9), and one that was in close proximity to the well that had the phthalate (well 8). In addition, two wells located in the path of the flow of the ground water were sampled to further evaluate whether contaminants are moving off site. These wells are located due east of well 10.

Four samples were collected from the well in which lead and arsenic had been detected previously. Two samples were collected before the household water treatment system and two were collected after the household treatment system. One sample from each of the two locations was filtered immediately upon collection by U.S. EPA employees and one sample was not. Both samples collected after the household treatment system and the filtered sample collected before the household treatment system contained levels of lead at concentrations considered acceptable for drinking water. The unfiltered sample collected before the household treatment system contained levels of lead at concentrations two times higher than the maximum contamination level allowed for public drinking water supplies. Because this sample had not gone through the household treatment system filter, nor had it been filtered by U.S. EPA personnel, it still contained particulates, thus verifying that the particulate matter in the well is the source of elevated lead levels. Because the lead is not

dissolved in the water, it is unlikely that the lead originated from the Mercer site. Levels of arsenic were found at acceptable levels in all four samples.

Bis(2-ethylhexyl)phthalate was detected again in the same well in which it had been detected previously (well 9), but at very low levels. Because of this detection, albeit at low levels, U.S. EPA will continue to monitor the well.

It is important to note that the chemical found in the sampling conducted in November 2000 that caused U.S. EPA to conduct additional residential well sampling (DCBA) has not been found in subsequent sampling.

Sediment Sampling

On February 28, 2001, U.S. EPA took five sediment samples from locations in the wet field area that are in the path of the flow of the surface water from the ravine area. U.S. EPA took these samples in order to assess whether contaminants are being carried from the ravine area through surface water runoff. The results of this sampling indicated the presence of contaminants, but at concentrations below Ohio EPA's Voluntary Action Program (VAP) standards for residential soil. VAP standards are voluntary soil cleanup levels established by Ohio EPA to help guide individuals in the private sector to clean up soil to levels considered protective of human health and the environment. Levels below the VAP standards are considered acceptable.

Work Plan for Additional Activities

U.S. EPA has requested the PRPs to prepare a work plan to address the following activities:

- Excavation and removal of drums in the two additional areas (areas 3 & 4) identified in the wet field immediately southwest of the ravine.
- Investigation of the possibility of drums in another area (area 5).
- Conducting chemical specific air monitoring and establishing an odor control system during excavation.
- Preparation of an emergency management plan.

Other Activities

On March 22, 2001 PRP contractors and U.S. EPA personnel identified another area where drums may be buried. One drum shell was observed sticking out of the ground approximately 100 yards east of the pole barn. This will be investigated further.

On April 25, 2001 PRP contractors completed the backfilling and grading of the pole barn excavation area (area 2). Soil samples collected from the bottom and sides of the excavation area confirmed that all contamination at concentrations above the Ohio EPA VAP standards for residential soil had been removed.

Well Construction Investigation

In an effort to further clarify the source of the lead and arsenic which was detected in well #4, U.S. EPA, in conjunction with the Licking County Health Department and the Ohio Department of Health, conducted an investigation of the construction of the well. On May 1, 2001 the Licking County Health Department conducted a dye test on well #4 to determine whether the well casing was intact. On May 2, 2001 a representative of the Ohio Department of Health, Private Well Group, inserted a camera into the well to view the condition of the well casing and screen. The casing was seen to be very rusted and the dye, which was placed around the outside of the well and flushed into the ground, was observed seeping into the well through the casing. The water inside the well was also observed to have a lot of particulate matter floating in it.

These observations indicate that the construction of well #4 has deteriorated and it is likely that the lead and arsenic contamination in the well is naturally occurring in the particulate matter.

Contact Information

Robert Paulson
Community Involvement Coordinator
Office of Public Affairs (P-19J)
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590
Phone: (312) 886-0272 or
(800) 621-8431 ext. 60272
Fax: (312) 353-1155
Email: paulson.robert@epa.gov

Karla Auken
On Scene Coordinator
U.S. EPA Region 5
25089 Center Ridge Road
Westlake, OH 44146
Phone: (440) 250-1741
Fax: (440) 250-1750
Email: auken.karla@epa.gov



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